

A great mass of material was secured, and as soon as it is put into proper shape for examination will be submitted to specialists for detailed study and report. As might be expected, the Antiguan material is much in excess of that secured at Barbados.

FOUR NEW AFRICAN MEMBRACIDÆ.*

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1. **Anchon gunni**, sp. nov. (Figs. 1 and 2).

Near *A. nodicornis* Germar but lacking the anterior tooth on the angle of the posterior process, and differing in the markings of the pronotum and tegmina.

Slender, black, punctate, sparingly pubescent; densely white tomentose behind suprahumeral horns and on sides of thorax; suprahumeral horns long, broadly foliaceous at tips which are strongly decurved and sharply pointed; posterior process strongly angular at base, depressed at centre, tip just reaching apex of abdomen; scutellum about as long as broad, strongly bidentate at tip; tegmina smoky-hyaline with ferruginous margins; legs and under surface of body brown, tarsi flavous.

Head broader than long, finely punctate, rather densely pubescent with white hairs; base strongly convex, slightly sinuate; eyes prominent, gray-black; ocelli large but not conspicuous, sordid gray, about equidistant from each other and from the eyes and situated about on an imaginary line drawn through centres of eyes; inferior margin of genæ strongly sinuate; clypeus twice as long as wide, black, punctate, pubescent, extending for more than half its length below inferior margins of genæ, tip rounded and weakly pilose.

Pronotum black, finely punctate, rather sparingly pubescent with white or silvery hairs; metopidium perpendicular, somewhat convex, about as broad as high, narrowest at bases of horns; humeral angles very prominent, triangular, acute; median carina strongly percurrent; suprahumeral horns long, narrow at base but broadly foliaceous at tip, practically contiguous at bases, extending upward and outward, the tips flattened, triangular, sharp, and suddenly bent outward and backward; posterior process rising well above scutellum, then bent sharply backward, sloping downward to meet internal angles of tegmina and then following margins of tegmina to a point about as far caudad as the end of the abdomen, tip very sharp and slightly decurved; scutellum about as long as broad, black, punctate, gradually narrowed towards the apex which is strongly bidentate; a dense linear patch of white tomentose pubescence extends backward from the posterior base of each suprahumeral horn over the pronotum and on to the base of the scutellum.

Tegmina long, narrow, smoky-hyaline, much wrinkled; base narrowly brown, punctate and pubescent, internal apical margin tinged with ferruginous; tips pointed; costal margin not marked with brown; five apical and two discoidal cells. Hind wings with three apical cells.

Under surface of body dark brown; sides of mesothorax and metathorax densely white tomentose; hind trochanters not armed with spines; femora and tibiae brown, tarsi flavous; claws brown.

*Contribution from the Zoological Laboratory of the University of Kentucky.
October, 1919

Length including tegmina 7 mm.; width between tips of suprahumeral horns 5.8 mm.

Type.—Female.

Locality.—Pretoria, South Africa.

Described from a specimen collected by Mr. David Gunn on January 8, 1915. Type in author's collection. I take pleasure in dedicating this species to Mr. Gunn, who has so kindly furnished me with a large number of interesting species of Membracidae from South Africa.

The genus *Anchon* is apparently well represented in South Africa. Mr. Gunn has sent me specimens of *A. senegalensis* Fairm., collected at the same locality and at the same time as the above.

2. ***Anchonoides minutus***, sp. nov. (Figs. 3 and 4).

Small, black, punctate, densely pubescent; suprahumeral horns short and very thick; posterior process raised above scutellum, strongly sinuate but not angulate, extending beyond internal angles of tegmina but not reaching apex of abdomen; scutellum entirely exposed, longer than broad, bidentate; tegmina smoky-hyaline faintly tinged with ferruginous, base brown; under surface of body black; legs dark brown with tibiae somewhat ferruginous and tarsi flavous.

Head wider than long, black, finely punctate, densely pubescent; much swollen in front; base convex and sinuate; eyes large, prominent, brown; ocelli small, pearly, conspicuous, somewhat protruding, about equidistant from each other and from the eyes and situated about on a line drawn through centres of eyes; inferior margins of genae sinuate, lobed at margins of clypeus; clypeus longer than wide, extending for half its length below inferior margins of genae.

Prothorax very dark brown in front, black behind, finely punctate, very densely pubescent with silvery hairs; metopidium higher than wide, narrowest at base of suprahumeral horns, brown on upper two-thirds, black just above head, very roughly sculptured, swollen along central line; median carina percurrent; humeral angles large, prominent, triangular, acute; suprahumeral horns very thick, heavy, short, roughly quadricarinate, extending almost directly outward, about as long as the distance between their bases, tips sharp and decurved; posterior process long, very slender, strongly sinuate, smooth, tricarinate, base raised high above scutellum, tip sharp and decurved, extending beyond internal angles of tegmina but not reaching apex of abdomen; scutellum entirely exposed, a little longer than wide, brown, punctate, densely pubescent, gradually narrowed toward tip which is strongly bidentate; a linear white tomentose patch extending backward over the pronotum from the base of each suprahumeral horn and covering external basal angle of scutellum.

Tegmina smoky-hyaline, wrinkled; a ferruginous spot at internal angle, another at distal end of basal costal cell and a faint fascia at apical margin; base brown, coriaceous and punctate; tip rounded; veins strong, ferruginous, marked with brown in central areas; four apical cells. Hind wings with three apical cells.

Under surface of body black; sides of thorax densely pubescent; margins of abdominal segments ferruginous; coxae, trochanters and femora dark brown, tibiae ferruginous and minutely spined, tarsi flavous.

Length including tegmina 5 mm.; width between tips of suprahumeral horns 3 mm.

Type.—Female.

Locality.—Pretoria, South Africa.

Described from a specimen collected by Mr. David Gunn on Nov. 3, 1914.

Type in author's collection.

3. **Otinotus pilosus**, sp. nov. (Figs. 5 and 6).

Large, brown, very densely pilose; suprahumeral horns short, heavy, blunt, extending outward and upward and no longer than the distance between their bases; posterior process long, slender, sinuate, impinging on tegmina and extending to a point about half-way between internal angles and apices of tegmina; tegmina hyaline, wrinkled, base narrowly brown; legs and under surface of body uniformly brown.

Head twice as wide as long, subquadrate, dark brown, finely punctate and densely pubescent; base sinuately convex; eyes large, prominent, brown; ocelli large, prominent, glassy, transparent, considerably nearer to each other than to the eyes, and situated about on a line drawn through centres of eyes; inferior margins of genæ rounded; clypeus nearly three times as long as wide, extending for three fourths its length below inferior margins of the genæ, margin adjoining genæ angulate, tip broadly rounded.

Pronotum dark brown, finely punctate, densely pilose with yellowish hairs; metopidium about as broad as high, nearly perpendicular above the head, slightly convex; median carina distinctly percurrent; humeral angles very large, prominent, triangular, blunt, extending almost as far lateral as the suprahumeral horns above them; suprahumeral horns short, heavy, blunt, somewhat compressed dorso-ventrally, strongly tricarinate, extending outward and slightly upward, tips as seen from above roughly truncate; scutellum well exposed on each side, apex yellow, smooth and bidentate, base ferruginous, punctate and densely pilose; posterior process long, slender, sinuate, tricarinate, impinging on tegmina, base not elevated above scutellum, tip acuminate, decurved and black, extending to a point about half-way between internal angle and apex of tegmen but not reaching extremity of abdomen.

Tegmina hyaline, wrinkled; base narrowly brown, coriaceous and punctate; tip pointed; five apical cells. Hind wings with four apical cells.

Legs and under surface of body uniformly dark ferruginous brown; sides of thorax densely white tomentose; tibiæ closely pilose with long, white, bristly hairs.

Length including tegmina 9 mm.; width between tips of suprahumeral horns 4.7 mm.

Type.—Female.

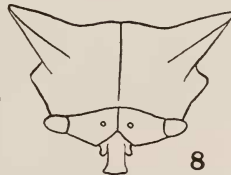
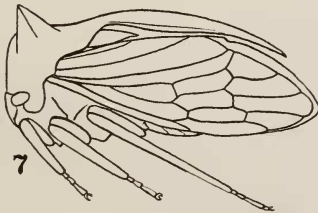
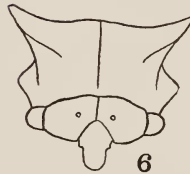
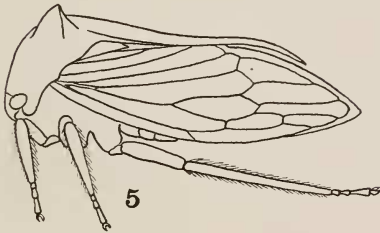
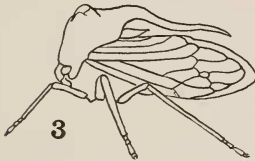
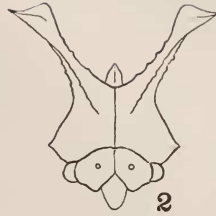
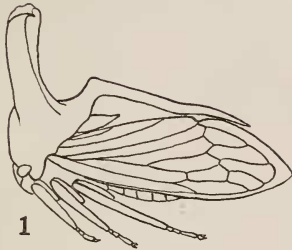
Locality.—Dutch East Africa.

Type in author's collection.

This species is apparently close to *O. nigrorufus* Distant, but differs in colour, in the markings of the tegmina and in the structure of the base of the posterior process.

4. **Otinotus arcuatus**, sp. nov. (Figs. 7 and 8).

Large, robust, ferruginous-brown; suprahumeral horns short, pyramidal, sharply angular, extending outward and upward and about as long as the distance between their bases; posterior process long, heavy, strongly arcuate, the



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base slightly raised above the scutellum, tip sharp and extending to a point about midway between internal angles and tips of tegmina; tegmina sordid hyaline, wrinkled, base brown and punctate; legs and under surface of body ferruginous-brown.

Head twice as broad as long, bright reddish brown mottled with black, roughly sculptured, sparingly punctate, sparsely pubescent with silvery hairs; base regularly rounded; eyes large, prominent, dark brown; ocelli large, reddish, somewhat protruded, conspicuous, much nearer to each other than to the eyes and situated about on a line drawn through centres of eyes; inferior margins of genæ nearly straight, sloping downward; clypeus nearly three times as long as wide, lobed at angles of genæ, extending for three-fourths its length below margins of genæ, tip swollen and subtruncate.

Pronotum reddish brown, finely and closely punctate, sparingly pubescent with whitish hairs; metopidium broader than high, swollen in centre, perpendicular above the head, a large irregular callosity above internal angle of each eye; median carina strongly percurrent; humeral angles large, prominent, triangular, blunt; suprahumeral horns short, straight, heavy, strongly tricarinate, acute, extending outward and upward, about as long as the distance between their bases; scutellum broadly exposed on each side, brown, punctate, pubescent, gradually narrowed to apex which is smooth, white and bidentate; posterior process long, heavy, strongly arcuate, tricarinate, the base slightly upraised above scutellum, the tip acuminate and extending to a point about midway between internal angles and apices of tegmina, but not nearly reaching extremity of abdomen.

Tegmina hyaline, wrinkled; base brown, coriaceous and punctate; veins prominent and brown; no maculations; five apical cells. Hind wings with four apical cells.

Legs and under surface of body uniformly ferruginous-brown; sides of thorax densely white pubescent.

Length including tegmina 8 mm.; width between tips of suprahumeral horns 5.8 mm.

Type.—Female.

Locality.—Pretoria, South Africa.

Described from two females collected by Mr. David Gunn on January 11, 1915. Type and paratype in author's collection.

The South African species of the genus *Otinotus* bear a strong superficial resemblance to the old genus *Centrotus* (Fabr.), but may be at once separated from the genus by the difference in the number of apical cells of the hind wings.

EXPLANATION OF PLATE XIX.

- Fig. 1. Lateral outline of *Anchon gunni*, sp. nov.
2. Frontal outline of *Anchon gunni*, sp. nov.
3. Lateral outline of *Anchonoides minutus*, sp. nov.
4. Frontal outline of *Anchonoides minutus*, sp. nov.
5. Lateral outline of *Otinotus pilosus*, sp. nov.
6. Frontal outline of *Otinotus pilosus*, sp. nov.
7. Lateral outline of *Otinotus arcuatus*, sp. nov.
8. Frontal outline of *Otinotus arcuatus*, sp. nov.